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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shuichi Yamaguchi

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EXAMINER

NGUYEN, LAM S

ART UNIT

PAPER NUMBER

2853

MAIL DATE

DELIVERY MODE

06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/818,765

Applicant(s)

YAMAGUCHI ET AL.

Examiner

LAM S. NGUYEN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4 and 11-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 08/969328.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 2-4, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vollert (DE 003401071A1) in view of Scheffelin et al. (US 5903292) and Heinzl et al. (US 4253103).
(*The translation document of Vollert reference filed by the applicants is used in this rejection*).

Vollert discloses a method of refilling a spent ink bag having a flexible bag portion having an interior (*FIG. 1-2, elements 3-6*) for use in an ink jet recorder, comprising the steps of:

Referring to claim 2:

providing the spent ink bag (*FIG. 1-2, elements 3-6*), the spent ink bag having an ink supply port/a second opening (*FIG. 2, elements 8-9*) that is selectively engageable with the ink jet recorder (*FIG. 1: The ink bags 3-6 are in ink communication with the ink jet recorder 1 (page 1, 3rd paragraph and page 4, 4th paragraph) through the ink supply system 7 and the ink supply ports*);

positioning the spent ink bag (*FIG. 1: The ink bags 3-6 are mounted on the ink cartridges 11-14*);

inserting an ink needle into the ink supply port/the second opening of the spent ink bag (*FIG. 1 and page 5, lines 10-15: When mounting the ink bags 3-6 on the ink cartridge*

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11-16, the sealing plug 9 is pierced by a hollow needle (17-18) arranged at the top of the ink cartridge 11-14);

charging the spent ink bag only through said port with a specified quantity of ink (*FIG. 2: Ink is refilled/charged to the ink bags 3-6 from the ink cartridge 11-14 through the ink ports 8 and needle 17-18*).

- Voller does not disclose the step of discharging ink from the spent ink bag only through said port before charging the spent ink bag (**Referring to claims 2, 11**) or pressing the spent ink bag to cause, at least in part or a quantity of residual ink, the discharging of ink through the second opening/port (**Referring to claims 16-20**), and that the ink bag is being initially filled with ink through a first opening in the bag that is sealed after the ink bag is initially filled, wherein the first opening is different, disposed on a line, and opposite from the second opening (**Referring to claims 3, 4, 14-15**).

Scheffelin et al. discloses an ink cartridge (*FIG. 3, element 16*) having an ink bag 51 that is initially filled with ink through a first opening (*FIG. 3, element 46*) that is sealed after the ink bag is initially filled (*column 4, lines 62-65*), wherein the first opening is different and relatively opposite disposed from an refill ink opening (*FIG. 3, elements 24, 26*), wherein before the ink bag 51 is refilled, the ink in the ink bag 51 is drained/discharged by withdrawing plunger 232 of syringe 228 to cause a negative pressure in the ink bag 51 to press the ink bag into its compressed state (*column 13, lines 5-10: The amount of ink discharged is the quantity or at least a part of residual ink*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the ink refilling process in the ink cartridge disclosed by

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Voller such as discharging ink from the spent ink bag before charging the spent ink bag (through the same ink port as only one available in Voller) to make the ink bag be in its fully compressed state as disclosed by Scheffelin et al. The motivation of doing so is to create a negative pressure inside the ink bag so that the negative pressure ink bag will draw all ink contained in a flaccid bag, having the capacity less than the one of the ink bag, into the ink bag without applying any outside pressure force as taught by Scheffelin et al. (*column 13, lines 5-20*).

- In addition, Voller in view of Scheffelin et al. even though teaches discharging ink from the ink bag by pulling the spring, but do not disclose a pressing plate for pressing the spent ink bag to cause, at least in part, the discharging.

Heinzl et al. discloses a printing system having an ink bag (*FIG. 1, element 3*) and a pressing plate (*FIG. 1, element 5; The pressure button*) for applying a pressure on the ink bag (3) to cause ink discharging from the ink bag (*column 6, lines 50-57*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time invention was made to modify the printing system disclosed by Voller in view of Scheffelin et al. to discharge ink from the ink bag by a pressing plate for pressing the ink bag (rather by pulling the spring) as disclosed by Heinzl et al. The motivation of doing so would have been to create a positive pressure to cause ink flow out of the ink bag as taught by Heinzl et al. (*column 6, lines 50-57*). In addition, it is simply well known in the art that in order to discharge or drain ink from an ink bag, one just simply applies/causes a pressure, either a negative pressure caused by pulling a spring or a positive pressure caused by pressing (by any means such as a pressure button (5) on the ink bag to force ink out of the ink bag.

- **Vollert also discloses the following claimed invention:**

Referring to claims 11-13: removing the spent ink bag from the ink jet recorder (*Fig. 1-2: The ink bags 3-6 are removed from the ink recorder 1 then inserted into the cartridges 11-14 for being ink refilled*).

Response to Arguments

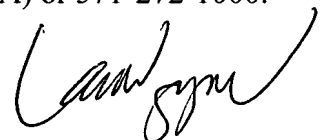
Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LAM S. NGUYEN